USP 6,285,995, is being prepared for submission to the USPTO under separate cover, based on the attached declaration of the undersigned. Because the Applicant's invention was invented prior to 22 June 1998, the filing date of USP 6,285,995, the Applicant respectfully requests the Examiner's withdrawal of the rejection of claims 1-15 under 35 U.S.C. 102(e) as being clearly anticipated by USP 6,285,995.

The Examiner has rejected claims 1-16 under 35 U.S.C. 102(e) as being anticipated by USP 6,181,818 to Sato et al., hereinafter Sato. Independent claims 1 and 11 have been amended in view of this prior art. Claims 3, 5, 13, and 15 are amended to conform to the terms used in amended claims 1 and 11. The Applicant respectfully traverses this rejection in view of these amended claims.

(Because the Examiner referenced claims 17-20 in the body of the remarks associated with this rejection, and because the cover sheet identified claims 1-20 as being rejected, the Applicant assumes that the "claims 1-16" term in the Examiner's rejection was intended to read "claims 1-20".)

As amended, claims 1 and 11, upon which claims 2-5 and 12-15 depend, specifically recite that the characterization of the image includes a plurality of measures that are proportional to the frequency of occurrence of a plurality of colors.

As originally claimed, claims 6 and 16, upon which claims 7-10 and 17-20 depend, specifically recite that the comparison of images is effected by comparing the frequency of occurrence of select colors within a partition of each image.

Sato determines frequencies of occurrences of colors within partitions of an image, but does not use these frequencies of occurrences to compare images, and does not use measures that are proportional to these frequencies of occurrences to characterize an image.

Sato repeatedly teaches the characterization of an image based on a ***singular*** color associated with each region in the image (Sato, column 7, lines 43-44; column 8, line 3, lines 9-13, and lines 22-23; column 13, lines 44-47; column 14, lines 8-10; column 15, line 4; column 16, line 62 through column 17, line 11; column 19, lines 44-59; column 20, lines 63-65; and elsewhere).

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To expedite the search for regions of similar colors, Sato creates an index table as illustrated in FIG. 45. The index table identifies the colors that are located within each block of the image. In the example entry of FIG. 45, the color C1 is located in Region 1 of a first image, and in Region 3 of a second image. The frequency of occurrence of color C1 in each of these regions of each of these images is not contained in the index table.

Sato uses histogram information to determine whether each frequency of occurrence of each particular color C1-C12 are above some threshold amount (T(R)). If a color is above this threshold amount, this region is determined to contain this color, and the corresponding entry of image number and region number is entered in the index table (steps S174, S175 of Sato's FIG. 44). That is, each frequency of occurrence is used to determine whether an entry is to be made to the index table. Once the entry is made, or not, the frequency of occurrence is not used again.

Sato computes frequencies of occurrences of colors, but does not use measures that are ***proportional to*** these frequencies of occurrences, as specifically claimed in the Applicant's amended claims 1 and 11.

Sato subsequently teaches that image comparison is performed by searching the index table for regions that contain a specific, and ***singular***, hue value, H. The predefined colors (C_1-C_{12}) on either side (C_k, C_{k+1}) of the singular hue value H are determined, thereby defining a "color range" and the index table is search to determine in which images and regions either of these colors is located (Sato column 26, lines 21-39). In the detailed description of the comparison process at Sato's column 27, line 27 through column 30, line 12, Sato repeatedly refers to identifying regions containing a similar color (*singular*) to a region in a target image. Specifically: "the seventh embodiment exemplifies a case wherein at least one closed region which is drawn by a searcher (operator) by designating its position, shape, and ***color*** is used as an image serving as a search key, and an image stored in the image database is searched using the position, shape, and ***color*** of the closed region" (Sato's column 28, lines 21-28). Of particular note is Sato's repeated use of the singular term color, and the lack of any reference to frequencies of occurrences of colors within the region.

Sato does not perform a comparison of frequencies of occurrences of colors in each region of an image, as specifically claimed in the Applicant's independent claims 6

and 16. Sato specifically teaches a search that is based on locating a single color (hue) that characterizes a region of a designated image via an index of image and regions associated with each color. Neither the frequency of occurrence of the hue value, nor the frequency of occurrence of each color in the indexed images is used in Sato's comparison process.

Because Sato does not teach characterizing an image using measures that are proportional to frequencies of occurrences of colors in the image, as specifically claimed in the Applicant's claims 1 and 11, and because Sato does not teach comparing two images by comparing frequencies of occurrences of colors in the image, as specifically claimed in the Applicant's claims 6 and 16, the Applicant respectfully requests the Examiner's reconsideration of the rejection of claims 1-20 under 35 U.S.C. 102(e) as being anticipated by Sato.

Respectfully submitted,

Robert M. McDermott, Esq.
Reg. No. 41,508
804-493-0707

CERTIFICATE OF MAILING OR TRANSMISSION

It is hereby certified that, on the date shown below, this correspondence is being:

[ ] deposited with the United States Postal Service with sufficient postage as first-class mail in an envelope addressed to: ASSISTANT COMMISSIONER FOR PATENTS, WASHINGTON, DC 20231.

[X] transmitted by facsimile to the United States Patent and Trademark Office at 703-872-9314.

On 28 May 2002 By

VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (Amended) A method for characterizing an image comprising:

partitioning the image into a plurality of partitions, each partition including a plurality of pixels, each pixel having a color, [and]

determining a frequency of occurrence of each color of the plurality of pixels within each partition, and

creating a characterization that includes a plurality of measures that are proportional to the frequency of occurrence of a plurality of colors.

3. (Amended) The method of claim 2, further including

identifying a plurality of populous colors, based on the frequency of occurrence of each color, and

[characterizing the image based on] the plurality of measures includes proportions of each of the plurality of populous colors in each partition.

5. (Amended) The method of claim 1, further including

identifying a plurality of populous colors, based on the frequency of occurrence of each color, and

[characterizing the image based on] the plurality of measures includes proportions of each of the plurality of populous colors in each partition.

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11. (Amended) A system for characterizing an image comprising:

a partitioner that is configured to partition the image into a plurality of partitions, each partition including a plurality of pixels, each pixel having a color, and

an accumulator that is configured to determine a frequency of occurrence of each color of the plurality of pixels within each partition, and

wherein

the system is configured to create a characterization of the image that includes a plurality of measures that are proportional to the frequency of occurrences of a plurality of colors.

13. (Amended) The system of claim 12, wherein

the [system is configured to characterize the image] plurality of measures are based on the frequency of occurrence of each of a plurality of populous colors in each partition.

15. (Amended) The system of claim 11, wherein

the [system is configured to characterize the image] plurality of measures are based on the frequency of occurrence of each of a plurality of populous colors in each partition.

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Robert M. McDermott, ESQ.
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Montross, VA 22520

27 May 2002

To Whom It May Concern:

I prepared the "Detailed Description of the Preferred Embodiment" section of the patent application 09/110,613, which is the parent application to the divisional application 09/934,962.

I hereby certify that I completed this Detailed Description, and the accompanying Drawings before 22 June 1998.

Sincerely,

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